

Training Program Instructions

	CONSULT YOUR PHYSICIAN PRIOR TO BEGINNING THIS PROGRAM TO MAKE SURE YOU ARE HEALTHY ENOUGH FOR STRENGTH AND CARDIOVASCULAR EXERCISE! Complete this program at YOUR OWN RISK.
	Begin this training program 8-12 weeks before your trip so that you have enough time to complete the program. This is a 6-week training program at minimum, but you may find that an additional 2-3 weeks is necessary to maximize your results and your recovery between training sessions. Also, allow 5-7 days of total recovery and no training (very light aerobic exercise and stretching is okay) before your trip. This is to ensure your body is fully recovered from training and ready to go!
	Complete the “YMCA Step Test.” You will retest every 3 weeks to assess your progress and determine whether or not any modifications should be made to your training program.
	Do your best to follow the schedule and progressions as detailed in this program, but please understand that all people respond to training in different ways. If you need extra time before progressing your strength and/or aerobic exercises, please take it! Remember that every training session is only as effective as your ability to recover.
	Remember to fuel your body appropriately. If you are not currently engaged in an exercise program, or if this program increases your overall level of exercise, expect that you will be hungrier than usual. Don’t worry, this is normal and you should allow yourself to eat more food to compensate for the additional energy expenditure. Be sure to prepare your meals and snacks ahead of time so that you are eating healthy foods that will aid your recovery and enhance your overall results. For best results, consult a nutritionist!
	While the use of cardiovascular and strength training equipment can be helpful, this entire program can be completed with just your backpack and a long set of stairs. It is recommended that you perform all your strength and cardiovascular exercises with the backpack and hiking shoes you plan to wear on your trip.
	All the components of this training program were carefully considered to prepare you for the best possible experience on your Grand Canyon river trip. That said, the MOST IMPORTANT component is TIME ON YOUR FEET! Do your best to follow this program as it is written. But, if all else fails, put on your hiking shoes and your backpack and get out walking or hiking for 30-60 minutes every day!

VISIT...

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YMCA Step Test Instructions

Useful assessment for measuring your cardiovascular (aerobic) fitness level. This assessment is based on your heart-rate recovery, or how fast your heart rate returns to baseline after exercise. You will complete the YMCA Step Test before beginning your 6-week training program and then again at the end of the program to assess your progress.

Equipment Needed:

- A 12-inch box or step (if not available, in most staircases the steps are roughly 6 inches each)
- A stopwatch or timer
- A metronome (there are many smartphone apps with this function as well as online metronomes if needed)
- Administration:
 - Set your metronome at 96 beats per minute
 - Stand facing the step
 - When ready, step up and down the step following the beat of the metronome; Follow this pattern with each beat: up, up, down, down
 - Continue for 3 minutes
 - After 3 minutes, immediately sit down and find your pulse at either your wrist or your neck
 - Count your pulse for 60 seconds
 - Use the chart below to determine your results

Men, based on age		18-25	26-35	36-45	46-55	56-65	65+
	Excellent	50-76	51-76	49-76	56-82	60-77	59-81
	Good	79-84	79-85	80-88	87-93	86-94	87-92
	Above Average	88-93	88-94	92-88	95-101	97-100	94-102
	Average	95-100	96-102	100-105	103-111	103-109	104-110
	Below Average	102-107	104-110	108-113	113-119	111-117	114-118
	Poor	111-119	114-121	116-124	121-126	119-128	121-126
	Very Poor	124-157	126-161	130-163	131-159	131-154	130-151

women, based on age		18-25	26-35	36-45	46-55	56-65	65+
	Excellent	52-81	58-80	51-84	63-91	60-92	70-92
	Good	85-93	85-92	89-96	95-101	97-103	96-101
	Above Average	96-102	95-101	100-104	104-110	106-111	104-111
	Average	104-110	104-110	107-112	113-118	113-118	116-121
	Below Average	113-120	113-119	115-120	120-124	119-127	123-126
	Poor	122-131	122-129	124-132	126-132	129-135	128-133
	Very Poor	135-169	134-171	137-169	137-171	141-174	135-155

To get the most out of your trip, it is recommended that you score in the “above average” category or higher for your age group AFTER completing the 6-week preparation program. However, the higher you score, the better prepared you will be!

After completing the training program, if your results are not at least in the “above average” category or higher we recommended that you spend an additional 2 weeks focusing only on the aerobic portion of the training program. In place of the two strength training days, you’ll want to do 2 additional days of “Aerobic A.”

Weekly Training Schedule



Be sure to complete the YMCA Step Test at the beginning of the program and again after completing the program to assess your progress!

Aerobic Program “A”

This portion of the training program is designed to build your cardiovascular and muscular endurance in long-duration, steady-state aerobic exercise. This will improve your ability to be active for extended periods of time as well as improve your ability to recover from bouts of exercise that are more strenuous.

Activity



Plan a brisk walk outdoors with your backpack and hiking shoes on. Your goal is to maintain consistent movement, without rest, for the specified time. Pace should be fast enough to increase your heart-rate and breathing-rate, but not so fast that you have to stop and rest!

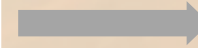
Week 1-2

30 min



Week 3-4

45 min



Week 5-6

60 min

Aerobic Program “B”

This portion of the training program is designed to build your cardiovascular endurance for repeated efforts of short-term but more strenuous activities. This will improve your ability to hike on steeper sections of the trail, load and unload your gear at camp, and get on and off the boat. This will also train your body to recover more quickly from these more intense efforts.

Activity

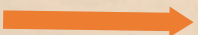


Find a set of stairs that covers 2 or 3 floors, wear your backpack and hiking shoes and have a timer available. You will go up and down stairs at a consistent and rapid pace without stopping. After 60 seconds, rest for 2 minutes and then repeat for 10 cycles.

**To better prepare yourself for loading and unloading gear, it is recommended that you CARRY your pack in your arms rather than strapping it onto your back. This will increase the demand for upper body strength*

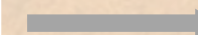
Week 1-2

10 x 60 sec. intervals; 2 minutes rest between sets (unweighted backpack)



Week 3-4

10 x 60 second intervals; 2 minutes rest between sets (backpack with ½ expected weight)



Week 5-6

10 x 60 second intervals; 2 minutes rest between sets (backpack with full expected weight)

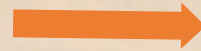
Aerobic Training Program “C”

*This portion of your training program is designed to get you more time on your feet with your backpack and hiking shoes on, preparing you for the overall volume of walking and hiking you will be doing on your trip. **This is one of the most important yet often overlooked aspects of your general preparation!***

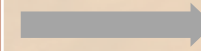
If you do not have much experience hiking on trails with uneven terrain, it is recommended that you complete this portion of the program at a place where you can do just that! After all, this is what you can expect to encounter on your trip. If you do not have access to any hiking trails, this can be done in more urban areas so long as you still are reaching the desired mileage.

Activity 	The emphasis is on increasing your distance. Your overall speed is not a concern and you may stop and rest where needed. Your goal is to complete the desired mileage with your backpack and hiking shoes on. You'll want to start with you backpack as close to the expected weight on your trip as possible.
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Week 1-2
4 miles



Week 3-4
6 miles



Week 5-6
8 miles

Strength Program “A”

Exercise	Sets x Reps	Intensity: Weeks 1 & 2	Intensity: Weeks 3 & 4	Intensity: Weeks 5 & 6
Front Step ups	3 x 10/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Lateral Lunge	3 x 10/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Lateral Step Down Touch	2 x 15/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Unilateral Farmer’s Carry	2 x 30, 60, 90 sec/side	20-30 lbs 30 sec carry each side	20-30 lbs 60 sec carry each side	20-30 lbs 90 sec carry each side
Single-Leg Calf Raises	2 x 15/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Supine Bridge Walk-out	2 x 30, 45, 60 sec	30 seconds	45 seconds	60 seconds
Front Plank	3 x 30, 45, 60 sec	30 seconds	45 seconds	60 seconds
Prone Cobra	3 x 30, 45, 60 sec	30 seconds	45 seconds	60 seconds

Strength Program “B”

Exercise	Sets x Reps	Intensity: Weeks 1 & 2	Intensity: Weeks 3 & 4	Intensity: Weeks 5 & 6
Lateral Step-ups	3 x 10/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Walking Lunge	3 x 10/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Front Step-Down Touch	2 x 15/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Unilateral Farmer’s Carry	2 x 30, 60, 90 sec/side	20-30 lbs 30 sec carry each side	20-30 lbs 60 sec carry each side	20-30 lbs 90 sec carry each side
Single-Leg Calf Raises	2 x 15/leg	Empty Backpack	½ Pack Weight	Full Pack Weight
Supine Bridge Walk-outs	2 x 30, 45, 60 sec	30 seconds	45 seconds	60 seconds
Active Straight Leg Raise	3 x 30, 45, 60 sec	30 seconds	45 seconds	60 seconds
Side Planks	2 x 30, 45, 60 sec/side	30 seconds/side	45 seconds/side	60 seconds/side

Stretching Program

Exercise	Repetitions	Target Area
Cat-Cow	10	Thoracic and Lumbar Spine
Thoracic Spine Mobilization	6/side	Thoracic Spine, Shoulders
90-90 Hip Stretch	6/side	Glutes and Hips
Kneeling Hip Flexor Stretch	6/side	Hip Flexors, Quadriceps
Iron Cross Stretch	6/side	Hamstrings, Glutes, Lower Back
Adductor Stretch	6/side	Adductors, Medial Hamstring
Toe Touches	10	Hamstrings, Lower Back
Calf Stretch	5/side	Calves

Strength Program "A" Photos

Front Step-ups



1. Stand facing a 12" box or stair
2. Step up onto the box with one leg and drive your opposite knee toward the ceiling
3. Lower back to start with a slow, controlled movement and repeat
4. Complete all repetitions on one leg before switching to the other leg

Lateral Lunge



1. With both feet facing forward, step to the side and shift your weight over the leading leg
2. Sit your hips back over your heel and allow your knee to bend toward your toe
3. Keep your opposite knee straight as you lunge
4. Step back to a neutral position and repeat to the other side

Grand Canyon Hike Training Program

Lateral Step-Down Touch



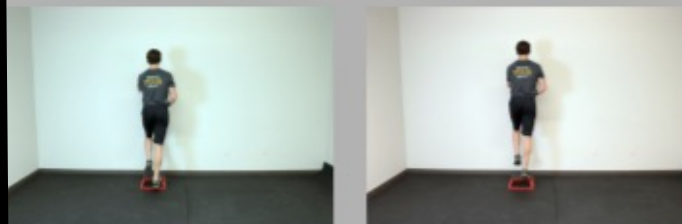
1. Stand sideways on the edge of a 6-inch box or step with one leg hanging off the side
2. Maintain a tall, upright posture as you bend the knee of your stance leg forward and lower the opposite foot toward the floor
3. Lightly touch the floor, then straighten your knee to come back up

Unilateral Farmer's Carry



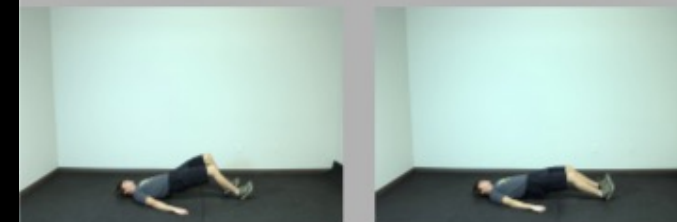
1. Hold a 20-30 pound weight (or a weighted pack) in one hand at your side
2. Maintain a tall, upright posture as you march in a forward direction for the desired amount of time.
3. Keep your shoulders parallel to the ground

Single-Leg Calf Raises



1. Stand on one foot on the edge of a box or step with your heel hanging off the back edge
2. Keeping your leg straight, lower your heel toward the floor until you feel a light stretch in your calf muscle
3. Then, raise up onto your toes to fully contract the calf muscle and repeat

Supine Bridge Walk-out



1. Begin on your back with your knees bent at 90 degrees and your heels on the floor
2. Push your hips up toward the ceiling and hold this position as you walk your feet out away from your body until your legs are nearly straight (only a slight bend in the knees)
3. Slowly walk your feet back to start and repeat. Your hips should stay off the ground for the duration of the exercise

Strength Program “A” Photos (cont.)

Front Plank



1. Maintain a tall, lengthened posture as you hold a plank position on the elbows and toes
2. Your head, shoulders, hips, knees, and ankles should be aligned with each other
3. Avoid letting your pelvis, spine, or head sag toward the floor

Prone Cobra



1. Lie in a prone position on the floor with your hands at your sides, palms facing down
2. Keeping your legs on the floor, gently lift your head and chest up off the ground
3. Lift your hands off the ground and rotate your palms outward (away from your body), squeezing the shoulder blades together
4. Keep your chin tucked and hold

Strength Program "B" Photos

Lateral Step-up



1. Stand sideways to a 12-inch box or stair
2. Step sideways up onto the box and drive your opposite knee up toward the ceiling
3. Lower back down in a slow, controlled movement and repeat
4. Complete all reps on one leg before switching to the other leg

Walking Lunge



1. Take a long step forward and lower your body toward the floor into a lunge position
2. Both knees should bend to approximately 90 degrees with the heel of the back foot off the ground
3. Step up onto the front leg
4. Repeat, leading with the opposite foot
5. Maintain a tall, lengthened posture

Grand Canyon Hike Training Program

Front Step-Down Touch



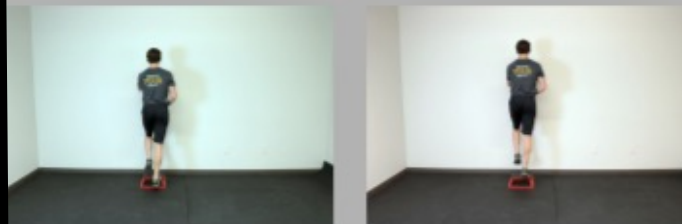
1. Stand on one foot on the edge of 6-inch box or step
2. Bend your knee forward and lower your body, reaching your opposite foot toward the floor
3. Lightly touch the floor with your toes, then raise back up to start
4. Complete all reps on one leg before switching to the other leg

Unilateral Farmer's Carry



1. Hold a 20-30 pound weight (or a weighted pack) in one hand at your side
2. Maintain a tall, upright posture as you march in a forward direction for the desired amount of time.
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Single-Leg Calf Raises



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2. Keeping your leg straight, lower your heel toward the floor until you feel a light stretch in your calf muscle
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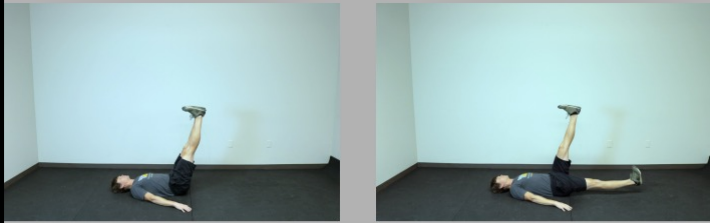
Supine Bridge Walk-out



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2. Push your hips up toward the ceiling and hold this position as you walk your feet out away from your body until your legs are nearly straight (only a slight bend in the knees)
3. Slowly walk your feet back to start and repeat. Your hips should stay off the ground for the duration of the exercise

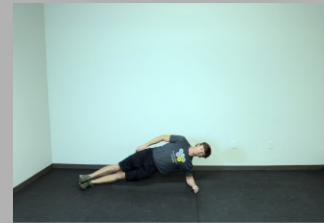
Strength Program “B” Photos (cont.)

Active Straight-Leg Raise (ASLR)



1. Lie on your back with your hands flat on the floor and both legs up in the air
2. Push your lumbar spine toward the floor and hold
3. Keeping both legs straight, alternate lowering one leg toward the floor and back up for the desired number of repetitions
4. If necessary, this exercise can be made easier by starting with knees bent, then extending the leg as you lower it toward the floor

Side-Plank



1. From a side-lying position, raise your body up onto your bottom elbow and foot
2. Avoid "sinking" into the shoulder of the supporting arm
3. Keep your feet stacked and maintain alignment through the ankles, knees, hips, shoulders, and head